Injury Control Update

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CDC Injury Center works to make families and communities safer

Every day, the headlines and local newscasts remind Americans of the human cost of injuries — and of the potential for prevention.

- A fire started by a burning cigarette in one apartment sweeps through the entire complex, leaving dozens of families homeless. *A smoke detector could have alerted the family to the hazard in time to take action.*
- An 8-year-old boy playing with his father's revolver inadvertently kills a young playmate. *Securely locked storage could have kept the gun out of a child's hands.*
- On New Year's Eve, a drunk driver swerves out of control and crashes into a car occupied by two young couples, both parents of toddlers; three of the four young adults are killed. *A system of sobriety checkpoints could have intercepted the drunk driver, and quick EMS response and triage to the appropriate trauma care center might have saved these lives.*
- An elderly woman falls and fractures her hip; her treatment and rehabilitation cost thousands, and her limited mobility erodes her quality of life. *Minor modifications in her environment could have prevented the fall or at least reduced its impact, thus limiting her injury.*

Events like these, duplicated by the thousands every day of the year, are not "accidents." They are not random acts of fate. They are predictable — and they can be prevented.

The mission of the National Center for Injury Prevention and Control (NCIPC) of the Centers for Disease Control and Prevention (CDC) is to prevent such injuries from happening in the first place and to control and to minimize the extent of injury or disability among those who are injured.

Fulfilling that mission over the past decade, CDC has been a catalyst in the field of injury through its national leadership, support of research and training, and focus on a science-based prevention approach. Since 1985 when the landmark publication *Injury in America* recommended that federal injury control efforts be centralized under CDC, the agency has shaped a national response to the problems of injury.

CDC has fulfilled the challenge to focus federal injury control efforts, according to Dr. C. Everett Koop, the former U.S. Surgeon General. He credits NCIPC's leadership "with making a tremendous difference in helping the children of America lead safer lives and in reducing health care costs."

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GUEST COMMENTARY

Producing a masterpiece

By William Foege, MD, MPH

Few problems of public health are more important, more frustrating, more vexing than injuries. Throughout recorded history, the two major causes of premature death have been infectious diseases and injuries (both intentional and unintentional). While infectious diseases are still troublesome, impressive progress has been made, and measles has gone from the single most lethal agent in the world to a rare disease in this hemisphere.

> *"If you don't work on important problems, it's not likely that you'll do important work."*
>
> — RICHARD HAMMING

But injuries remain, unmoved and unimpressed by 20th century science, rhetoric, and political organizations, a plague of rich and poor countries alike. The landmark report by the World Bank, *The World Development Report 1993*, provides a way to measure the combined suffering and mortality for various diseases. By this measure, injuries (falls, automobile injuries, homicide, suicide, and war) constitute the second leading cause of suffering in the world, second only to respiratory infections.

The United States now has the potential to lead the world in trying to address this problem. A coherent, collaborative effort is being made to improve all aspects of injury control, from basic research through treatment and rehabilitation. But the big picture is sometimes hard to appreciate as we work on specific aspects of the problem. A Monet painting, viewed from across the room, can make you feel as though you are actually *in* the painting, feeling the sun while gazing at the waterlillies. At the distance Monet stood while he was painting, though, one sees only isolated brushstrokes. Monet, somehow, saw the larger picture while working on the details.

Hundreds of people are now working on an injury control masterpiece that will be fully appreciated only in years to come. The individual strokes are coming from people in national, state, and local government; from university researchers and private companies; from nongovernmental groups; and from volunteers and concerned citizens. Collectively, they are defining and describing the problem, identifying the risk factors, developing a nationwide research enterprise, developing and testing interventions, and then, with great ingenuity, finding ways to implement those interventions.

The field is young, the National Center for Injury Prevention and Control is barely two years old, but early results give hope that science can provide alternatives to fatalism. The center and its constituents have supported more than 1,000 peer-reviewed research papers and 10 injury control research centers. They are testing interventions from smoke detectors and bicycle helmets to ways for preventing youth and domestic violence. And they are developing creative partnerships with an ever-widening coalition of those interested in improving the quality of life.

Future generations will know by history only that the canvas once was stark and grim. We, on the other hand, conscious of the daunting size of the problem, are sufficiently refreshed by these early successes to try to visualize the masterpiece in progress. It is a dream of making Ameri-

cans safe, of reducing, for the first time in history, a scourge that has plagued everyone, but especially children and young people.

This newsletter is a way to share the hope and excitement, to identify and solve problems, to speed the application of "inspired strokes," and to say thanks for being part of the attempt to plan a rational and safe future.

Dr. Foege is chairman of the Advisory Committee for Injury Prevention and Control. A former director of CDC, he is now a health policy fellow at The Carter Center in Atlanta.

INJURY CENTER (continued)

Science is the foundation for prevention and control

NCIPC fuses science and practical programs to tackle the complex challenge of injury prevention. Effective prevention depends on more than intuition, hunches, or admonitions to "be careful." It depends on a scientific approach to define the problem and to demonstrate what works to prevent it.

That analytic approach has been used by CDC throughout the last half-century to combat public health problems like infectious and chronic diseases. And it can be applied to the problem of injury, now the major killer of children and young people. This approach asks four key questions:

- What is the problem?
- What causes the problem?
- What works to prevent it?
- How do you deliver effective prevention programs in communities?

In seeking the answers to these questions in the context of a broad range of types of injury, NCIPC has funded nearly 200 current and completed extramural research projects around the country. The research proposals undergo rigorous scrutiny, including peer review by experts outside CDC, to assure that they are scientifically credible and likely to yield information on which to build prevention and control interventions.

Examples of such research projects include:

- 15 community-based projects evaluating the effectiveness of various interventions (including peer counseling, mentoring, conflict resolution) to prevent violence among young people.
- a study of driver characteristics associated with fatal motor vehicle crashes, which showed that alcohol use is the strongest predictor for a fatality.
- preliminary surveillance for spinal cord injury in five states, showing that young black men have twice the rate of such injuries as young white men.
- a biomechanics research project, which found that energy-absorbing flooring materials could help reduce hip fractures from a fall.

A resource for states

NCIPC also supports programs in 35 state health departments that focus on a range of injury interventions, including prevention of domestic violence, infant safety seat use and seat belt use, and preventing motor vehicle crashes.

CDC's role in assisting states has been "a significant milestone for injury prevention and control," according to Jeff Simon, MS, president of the State and Territorial Injury Prevention Directors' Association (STIPDA), who also heads the New York State injury control program. "It gives states a point of reference and resources. We know the response and commitment are there when we need it."

"NCIPC fuses science and practical programs to tackle the complex challenge of injury prevention"

One characteristic of the field of injury prevention and control is its multidisciplinary nature. To help forge links between professionals in public health, criminal justice, trauma care and rehabilitation, biomechanics, and behavioral research, NCIPC supports 10 Injury Control Research Centers (ICRCs) throughout the country. These university-based centers conduct research, provide training, and support injury prevention efforts in their communities.

NCIPC's extramural grants program for research projects and injury control research centers was funded at $15.1 million for FY 1995. NCIPC supports state and community-based intervention evaluations in the amount of $17.6 million.

Building an injury prevention community

Many partners are needed to make prevention of injuries a reality. To help create a national agenda for injury prevention in the 1990s, CDC launched a two-year process to identify national goals and concrete plans. Representatives from federal agencies, state and local health departments, academic institutions, voluntary and professional organizations, and labor and management participated. Experts from various disciplines developed position papers on the prevention of four categories of injury—intentional, motor vehicle, home and leisure, and occupational—as well as trauma care, acute care, and rehabilitation of injuries. More than 800 injury professionals discussed these papers at the Third National Conference on Injury Control in 1991. Further review and refinement followed, leading to 165 recommendations, published in CDC's *Morbidity and Mortality Weekly Report (MMWR)*. Executive summaries of position papers also were published in selected journals, and the complete set of papers and recommendations was published by CDC in 1992.

In the next phase, the injury control community identified 22 priority objectives, which were described in *Injury Control in the 1990s: A National Plan for Action*, published in 1993. This plan will help individuals and organizations set their own priorities for research and education.

NCIPC takes the lead

In the past decade since *Injury in America* recommended a centralized national effort to integrate disparate research and program activities throughout the country, CDC has played a leadership and coordinating role, exemplified by the process leading to the national plan. In addition, NCIPC convenes national conferences, collects and analyzes statistics on injury, provides technical assistance to programs throughout the country, and publishes guidelines and recommendations in various injury-related areas. ■

West Virginia puts premium on training, acute care, and research

The state of West Virginia presents a challenge to people wanting to get anywhere fast. That includes emergency medical services (EMS) professionals.

Winding two-lane mountain roads cut through the state, separating isolated rural areas. Distances between the home or workplace of an injured person and the nearest hospital can be measured in hours, not miles. Rescue helicopters are the emergency vehicles of choice for reaching injured people in remote areas, but fog and snow limit their ability to fly into outlying areas in some seasons.

SPOTLIGHT ON THE STATES

But don't be too quick to stereotype West Virginians as being behind the times when it comes to injury control.

Quite the contrary. In fact, West Virginia boasts one of the most sophisticated injury control programs in the country, one that puts the tools of technology to work to meet its challenges of access to emergency care.

Rural, emergency care focus

The Center for Rural Emergency Medicine (CREM), based at the Robert C. Byrd Health Sciences Center of West Virginia University in Morgantown, is beginning its fourth year as a CDC-funded Injury Control Training and Demonstration Center. The center focuses on training health professionals and on emergency-department-based injury surveillance, a statewide injury prevention program, and applied research in rural injury prevention, control, treatment, and rehabilitation. CREM is unique among CDC injury grantees as the only one with a primary focus on training.

Dr. John E. Prescott, MD, FACEP, director of CREM, said that a focus on needs of rural care providers has been a "guiding light" for all their activities. "We look at the issues confronting rural health care providers, conduct research to help them solve those problems, and then implement practical, low-cost solutions." Access to care for emergency treatment of injuries has been a priority from the start, he said.

"Injury presents a unique picture in West Virginia," added Leah J. Heimbach, JD, RN, NREMT-P, and CREM administrator. "The state is sparsely populated: our total population is only about 1.8 million, and Charleston, the capital and largest city, has only 57,000 people." Other special features are pockets of Appalachian culture with a tradition of people taking care of their own, and a rise in outdoor adventure tourism such as whitewater rafting, skiing, hiking, all with the potential for

West Virginia's natural attractions draw many visitors, but the rugged mountain setting is a challenge in medical emergencies.

injuries. Narrow mountain roads and rugged terrain in many parts of the state add to the challenge of treating injured people.

Training emergency responders is essential

Early on, training was a priority to expand prehospital care in more remote areas. To date, CREM has trained more than 900 health professionals and has taken educational programs or technical assistance to 35 of the state's 55 counties. A standard training focus is delivery of specialty care courses such as basic life support, advanced cardiac life support, basic trauma life support, pediatric advanced life support, and advanced burn life support. Additional courses emphasize the role of EMS professionals in injury prevention.

An effort to enhance skills of emergency department nurses in outlying areas resulted in the "Emergency Nurses Partnership Program," in which rural ED nurses participate in both classroom training and a one-day clinical rotation at

the West Virginia University Hospital. The curriculum encompasses trauma care, cardiac care, triage strategies, respiratory emergencies, and medico-legal issues.

CREM also is committed to establishing an integrated training program in rural emergency medicine and trauma care. Toward that goal, it supports an emergency medicine residency program and an emergency medicine master's degree program for physicians assistants.

Surveillance is key

From the start, the CREM leadership team put a premium on getting information about injuries. Appreciating that surveillance data could help draw a picture of injuries in the state and point the way to educational and other types of interventions, CREM custom developed the Emergency Department-Based Injury Surveillance System (EDBISS). The system links data from the emergency department (ED) patient log, trauma registry, and hospital billing systems.

CREM staff have used the injury surveillance data for numerous purposes. For example, West Virginia has the fifth highest rate of occupational fatalities in

the country and also a high rate of nonfatal injuries, many related to high-risk

ACTIVE INJURY CONTROL NETWORK PRODUCES 2 VALUABLE RESOURCE REPORTS

The West Virginia Injury Control Network is a an advocacy group committed to raising public awareness about the impact of injury in the state. More than 70 individuals and organizations participate in efforts to educate the community and local and state governments. The Network recently published two resource documents that provide state-specific information. Both can be downloaded from the CREM home page.

- *Injury in West Virginia* provides a "snapshot" of injury in the state, including cause of death information by age group by county. The report notes that West Virginia's overall injury rate is higher than the national average in almost all categories.
- *Injury Control and Prevention Programs in West Virginia* is a sourcebook that inventories all the state's injury programs with contact names and numbers. It is cross-indexed by category, e.g., bicycle injuries, fires and burns.

industries such as logging, mining, and transport. An EDBISS analysis of medical charges related to work injuries found that transportation-related injuries accounted for the most expensive hospital charges on average. A separate study found that, because of disability, logging injuries had an impact greater than the number of injuries alone would indicate: "The long-term effects were devastating in cases where a worker lost a hand," said Ms. Heimbach. As a result of these findings, the center will work to develop specific employee education programs.

"MAPS" aids rural EMS providers

The response of EMS providers can make a life or death difference for injured and sick people who live in areas distant from hospital care.

The problem is that many EMS squads operating in sparsely populated areas don't have a heavy call load and also have a difficult time getting reimbursement. That dual problem threatens the economic viability of some squads and, consequently, EMS capacity in rural areas.

CREM responded to this challenge by developing Management Assistance Program for Squads (MAPS). The program provides computers, custom software, and training to make billing more effective and thus help the providers stay in business. The project also furnishes injury data to CREM, where it is analyzed to design interventions for injury problems in rural areas.

The first group of 10 EMS squads began training in August, and many others are on a waiting list. A 3-year grant of $360,000 to launch the program came from the Claude W. Benedum Foundation, a regional fund that fosters self-sufficiency in rural West Virginia, especially in the areas of education and health.

Technology expands access

Taking training to all the hospitals in the state put thousands of miles on the CREM van—and the demand is still growing. The program turned to MDTV, an interactive physician's telemedicine network, to expand their educational reach.

CONFERENCE HIGHLIGHTS LINK BETWEEN MANAGED CARE AND INJURY CONTROL

Managed care is fast becoming a fact of life in the U.S. health care system. What will its impact be on injury control and prevention? And what role can injury surveillance data play in helping identify areas of high costs and potential prevention interventions?

These issues and related subjects were addressed at the fall conference sponsored by the Injury Control Training and Demonstration Center of the West Virginia University Center for Rural Emergency Medicine (CREM).

The faculty tackled topics like barriers to collection and use of injury data, the impact of managed care on delivery of trauma care, and measuring the benefit of prevention programs.

Dr. John E. Prescott, CREM director, commented, "Managed care organizations want to know what prevention interventions really make an impact on the health and health-related costs of their enrollees. Injury projects with solid surveillance data can help target their efforts. For example, we know that falls and motor vehicle crashes are the major problems in our state—that's where the money goes for care. If we can get people to wear seat belts consistently and help the elderly at risk for falls, we can make a major impact on hospital utilization rates. That should catch the eye of managed care organizations and encourage them to tailor interventions."

The distance-based learning program made its debut in September with "Accidents Aren't," a presentation that emphasized the role of EMS providers in injury prevention. EMS personnel could attend the presentation at any one of seven hospitals nearest them. Another MDTV program scheduled before the winter tourist season was prevention and treatment of hypothermia and ski injuries.

CREM also has created its own niche on the information highway. It has an Internet "home page" which includes such offerings as a list of injury mechanisms (similar to e-codes), information on causes of injuries treated at the WVU Emergency Department, a hypertext map of West Virginia with extensive injury data by county, and a link to the University of Pittsburgh's injury control research information network. The address is: http:/www.hsc.wvu/ crem/crem.htm.

CREM staff saw the impact of Internet communications when they realized that about half the registrations for their recent conference on injury and managed care (see sidebar) came via Injury-L, an Internet-based discussion list managed by CREM.

Publications spread the word

Communications about research findings and injury prevention are high on the list for CREM staff. A quarterly newsletter *Friends of CREM* updates people around the state on the project's activities. Articles based on their approach to rural injury prevention and surveillance data appear in professional publications, and senior staff participate in numerous medical and health-related conferences. Their influence will even span the globe: in early 1996, Janet M. Williams, MD, CREM research director, will travel to Melbourne, Australia, to present papers on CREM at the Third International Injury Control Conference. ■

Local EMTs take a break with CREM staff, Dr. John Prescott and Leah Heimbach.

Injury control goes online

Always eager to bend technology to good use, the injury control community has added its presence to the information highway.

The NCIPC Home Page makes its debut in February 1996. The resources available will include general information on the center and its divisions, publications, research grants and funding opportunities, a "what's new" section, and scientific data, surveillance, and statistics on injury. The address is http://www.cdc.gov. ncipc.htm.

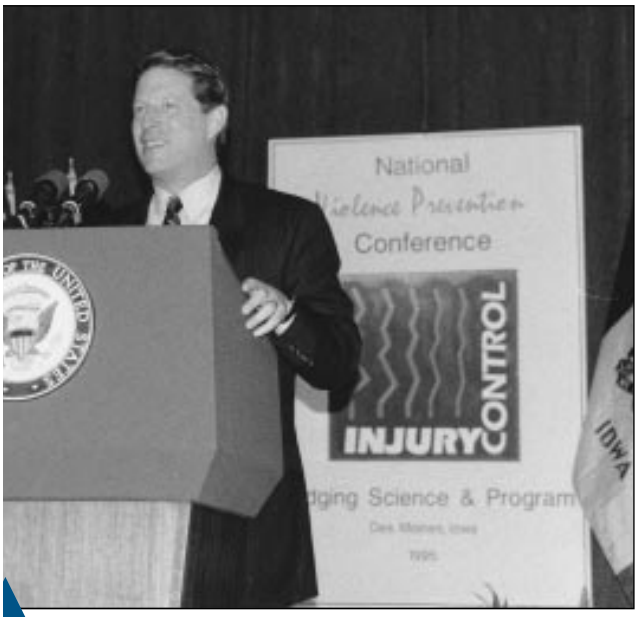
The Injury Control Resource Information Network (ICRIN) provides a comprehensive listing of injury control resources available on the Internet. The world wide web home page was developed by the Center for Injury Research and Control at

First National Violence Prevention Conference builds bridges, seeks solutions

"Community support and personal responsibility are the foundation to preventing violence and building a stronger country," said Vice President Al Gore in his keynote address opening the first National Violence Prevention Conference in Des Moines, Iowa, last fall.

Emphasizing the role of community-based projects, the Vice President said, "Everyone in the community—parents, teachers, law enforcement, the business sector, religious leaders—*everyone* has a stake in designing and implementing violence prevention programs."

The Vice President set the tone for the 3-day conference, which was sponsored by NCIPC and the University of Iowa Prevention Research Center in Des Moines. More than 1200 participants heard experts from the fields of public health, criminal justice, education, social service, academia, federal and state governments, and community-based organizations confront the problems of violence and discuss promising solutions.



Vice President Al Gore opens Violence Prevention Converence.

In his welcoming address, Senator Tom Harkin (R, Iowa), who was key in arranging the conference, pointed out that the conference was a nonpartisan event, as indeed the field of injury prevention must be.

Rep. Greg Gansky (D, Iowa) stressed the same theme in his opening address by highlighting the importance of injury prevention to people from all walks of life and all parts of the political spectrum.

Attorney General Janet Reno also addressed the conference participants, echoing the Vice President's theme. "Communities are at the center of violence prevention efforts. They understand their needs and resources, and the community is where so much of the innovation is happening."

Bringing people together

Building bridges to span differences in the field was a central conference theme, according to Mark L. Rosenberg, MD, MPP, director of NCIPC. He noted the following challenges:

- the gap between researchers and program practitioners
- different disciplines that may not speak the same language
- different types of violence (youth violence, domestic violence, and so on),

leading to a kind of "Balkanization" in the field

- different types of organizations, from community groups to foundations.

By bringing together professionals from the many sectors, Dr. Rosenberg said, CDC hopes to foster an interdisciplinary violence prevention community. Conference programs clustered around four prevention areas: family and intimate violence, youth violence, suicide, and workplace violence. Special sessions also addressed violence against people with disabilities, and cross-cutting sessions encompassed broad areas of violence prevention.

Violence impact felt by all

Focusing broad attention on the problem of violence couldn't be more timely, said David M. Satcher, MD, PhD, director of CDC. He highlighted several reasons for confronting violence, particularly within the context of public health:

- its devastating impact on the health of people in this country, in terms of disability as well as death
- the impact of pervasive fear in communities
- the burden on the health care system.

Recent CDC statistics underline the effect on young people in particular. Despite the recent slight dip overall, homicide remains the second leading cause of death for young Americans aged 15-24, and suicide rates have increased. The FBI's Uniform Crime Report (UCR) data show that, although the national crime rate overall fell 2% in 1994, there was an increase in crimes committed by adolescents, especially crimes committed with guns.

"While it's encouraging to see the overall homicide rate come down, it's distressing to see so many of our young people dying from violence that is either self-inflicted or inflicted by another," said Dr. Satcher. "We have got to find more effective ways to prevent this."

Seeking solutions

Too many youth at risk for violence lack life opportunities, hope, and positive adult role models, said Peter Edelman, JD, acting assistant secretary for planning and evaluation at the U.S. Department of Health and Human Services. Speaking at the opening plenary panel, he said young people "need things to say 'yes' to." Challenges include providing increased opportunities for employment and other life choices, as well as changing a culture that glorifies violence.

People are becoming overwhelmed by the statistics and "horror stories" about violence, maintained panel member Susan Schechter, MSW, of the Injury Prevention Center at the University of Iowa at Iowa City. "We haven't given people solutions—that's the missing piece." She said communities need to forge solutions at the community level.

Another panelist gave an example of how one community successfully took a strong stand against violence. Numerous violent events threatened to shut down a high school in Brooklyn. But the community refused to give up and developed a system of cluster schools as a response to the problem, according to Luis Garden-Acosta, president of
El Puente in Brooklyn.

Highlighting the role of criminal justice in violence prevention, Don C. Nickerson, the U.S. Attorney for the Southern District of Iowa, acknowledged that policemen have a long history of mistrust to overcome. Part of the solution is community policing, he said. "Police get out of the squad cars and talk to people in the neighborhood about what's important to them."

The workplace can be a focus for violence prevention efforts, suggested Linda Rosenstock, MD, MPH, director of the National Institute for Occupational Safety and Health (NIOSH). The public is becoming more aware that violence is the leading cause of death in the workplace, she said.

Investing in prevention

Several speakers underlined the need to confront resource issues for prevention. Vice President Gore said, "The problem of violence will yield to a response if we make the resources available. Prevention programs are not a luxury—they are basic."

"We must renew our efforts to convince Americans that we should be investing in prevention," said Attorney General Reno. "That shouldn't be hard. I've never met a person who would rather have had the crime committed and been a victim of the crime than to have prevented the crime in the first place." ■

CONFERENCE IMPACT CONTINUES

A guide to resources related to the violence prevention conference will be available soon in print and on the NCIPC worldwide web home page. The annotated guide will highlight publications, training manuals, and audiovisual materials appropriate for programs. Additional information will be available in an upcoming issue of *Injury Control Update*.

Attorney General Janet Reno chats with NCIPC staff. Left to right: Dr. Mark Rosenberg, Janet Reno, Chet Pogostin, Gene Shelly, Denise Johnson, Laura Martin, Mary Ann Fenley, Lee Annest.

CDC Director Dr. David Satcher and DHHS official Peter Edelman participate in conference sessions.

Resources You Can Use

Two publications on injury control topics have recently been published by the National Center for Injury Prevention and Control (NCIPC).

Guidelines for Surveillance of Central Nervous System Injury describes standards and recommendations for establishing a local or state system for surveillance of central nervous system (CNS) injury. The publication was developed as part of NCIPC's commitment to promote CNS surveillance throughout the country. The goal is to develop a more comprehensive picture of traumatic brain injuries and spinal cord injuries: their incidence, severity, and causes.

The manual provides case definitions and recommended data elements for collection and recommends approaches for designing and implementing surveillance plans. Also included are summaries of current state programs with a contact for each.

Authors of the publication are David J. Thurman, MD, MPH; Joseph E. Sniezek, MD, MPH; Denise Johnson, MS; Arlene Greenspan, DrPH; and Suzanne M. Smith, MD, MPH.

Suicide in the United States, 1980-1992 is the first in a series of surveillance summaries to be published by NCIPC's Division of Violence Prevention. Analysis of the data shows only a slight rise in the age-adjusted suicide rate for the total U.S. population during the 13-year period. However, the overall rate masks changes in specific rates related to age, race, sex, and geography. For example, suicide rates increased among young people aged 10-19, young black males, and elderly males of all races. Suicide rates are higher in Western states, linked to the higher rate of firearm suicides. Overall, firearms accounted for 77% of the increase in suicides in the 1980s and early 1990s.

The suicide surveillance report discusses trends and displays graphics related to age, race, gender, ethnicity, method, and geographic variation. It also presents data tables on numbers and rates of suicide, which are based on death certificate data provided by all 50 states and the District of Columbia.

The report's authors are S. Patrick Kachur, MD, MPH; Lloyd Potter, PhD, MPH; Stephen P. James; and Kenneth E. Powell, MD, MPH.

Both NCIPC publications can be ordered from NCIPC, Attention: Library Desk, MS K-65, 4770 Buford Highway NE, Chamblee, GA 30341-3724.

C A L E N D A R

MARCH 20 - 23 Ninth Youth Crime Prevention Conference, Miami, FL. Sponsored by Youth Crime Watch of America and the National Crime Prevention Council (NCPC). Contact: NCPC, 1700 K Street, NW, 2nd Floor, Washington, DC 20006-3817, or phone Youth Crime Watch of America at (305) 670-2409.

MARCH 26 - 30 Twelfth National Symposium on Child Sexual Abuse, Huntsville, AL. Sponsored by the National Children's Advocacy Center (NCAC) and the National Resource Center on Child Sexual Abuse (NRCCSA). Contact: NCAC, 106 Lincoln St, Huntsville, AL 35801, or phone (205) 533-0531.

Alcohol-impaired drivers: a danger to themselves

As anyone who observes an emergency department or trauma center on a weekend night can attest, alcohol remains one of the most important risk factors for serious injury and death in this country.

Alcohol played a role in 44% of the more than 40,000 traffic fatalities in 1993. An estimated two out of every five Americans will be involved in an alcohol-related motor vehicle crash at some time during their lives.

> *"We know from previous studies that more than half of all people arrested for DWI have serious drinking problems."*
>
> — ROBERT BREWER, MD, MSPH

Daily headlines tell the tale of innocent victims killed by drunk drivers. But what of the drunk drivers themselves? Are their chances of dying in a crash increased? Common sense would say "yes," but that assumption was largely untested until Robert Brewer, MD, MSPH, a medical epidemiologist at NCIPC, and his colleagues in North
Carolina examined the increased risk of future death for people arrested for DWI.

The researchers used state medical examiner data, police crash reports, and driver history files to evaluate the relationship between DWI arrests and future alcohol-related crash deaths. The study defined DWI as 100 mg/dL or refusal to be tested for alcohol levels. The research team came up with these findings:

- Teenagers and young adult drivers (ages 16-29) who were arrested for DWI were four times more likely to die in future crashes involving alcohol than were those who had not been arrested for DWI.
- Adult drivers over 30 who had one or more DWI arrests were eleven times more likely to die in future crashes than were drivers in that age group who had not been arrested for drunk driving.
- The risk of future death in an alcohol-related crash increases with the number of DWI arrests.

Alcoholism may be underlying problem

Dr. Brewer carried out the study in collaboration with Peter Morris, MD, MPH; Thomas Cole, MD, MPH; Stephanie Watkins, MSPH; and Michael Patetta, MA, all of the North Carolina Department of Environment, Health, and Natural Resources, and with Carol Popkin, MSPH, of the University of North Carolina Highway Safety Research Center. Their study, "The Risk of Dying in Alcohol-Related Vehicle Crashes among Habitual Drunk Drivers," was published in the August 25, 1994, issue of *The New England Journal of Medicine*.

"We know from previous studies that more than half of all people arrested for DWI have serious drinking problems," said Dr. Brewer. "This may help to explain why so many people who are arrested for DWI continue to drink and drive. And we know that serious drinking is most common among men in the 35 to 50 age group. That may explain why 'older drivers' who are arrested for DWI are at greater risk of

death in a future alcohol-related crash than younger drivers."

The authors emphasize the need to combine substance abuse assessment and treatment with strict legal sanctions against drunk driving. "Our society's tendency has been to focus mainly on legal interventions to address the problems of alcohol-impaired driving," said Dr. Brewer. "There is no doubt that such legal measures as increasing the minimum drinking age, administrative license revocation, and lowering the legal blood level for driving have all had a dramatic impact on reducing alcohol-related crash deaths. But we also need to evaluate the role of court-mandated substance abuse assessment and treatment for DWI offenders."

North Carolina has such a mandatory substance abuse assessment program, and Dr. Brewer and his colleagues are currently evaluating its effectiveness.

For their study of DWI arrests and alcohol-related crash deaths, Dr. Brewer and his co-authors received the 1995 Charles C. Shepard Science Award. The award is presented each year to the authors of the most outstanding peer-reviewed research paper published by CDC scientists during the preceding year. This was the first time an injury control study had received this award for scientific excellence. ■

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Injury online (Cont. from page 8)

the University of Pittsburgh. The address is http://info.pitt.edu/~hweiss/injury.htm.

Partnerships Against Violence Network (PAVNET) Online offers online information about federal resources related to violence prevention. It was created as a way to provide state and local groups with information about programs, funding sources, technical assistance, and teaching materials. The online service was developed by a coalition of federal agencies to improve speedy access to ideas and resources related to violence prevention. The address is Gopher//cyfer.esusda.gov:70/11/violence ■

NATIONAL CENTER FOR INJURY PREVENTION AND CONTROL
CENTERS FOR DISEASE CONTROL AND PREVENTION

Division of Unintentional Injury Prevention	770/488-4652
Division of Violence Prevention	770/488-4362
Division of Acute Care, Rehabilitation Research and Disability	770/488-4031
Office of Research Grants	770/488-4265
State Programs	770/488-4400
Automated Information Line	770/488-4677

Injury Journal Club

The following articles are based on work by NCIPC-supported injury control research centers.

Kyriacou DN, Arcinue EG, Peek C, Kraus JF. Effect of immediate resuscitation on children with submersion injury. Pediatrics 1994;84:137-142.

Do immediate efforts by bystanders or rescuers to resuscitate a child who has been submerged underwater improve neurological outcome? The answer is a resounding yes, according to this study of 166 children at a California hospital. The authors found that immediate resuscitation before the arrival of paramedics improved clinical outcomes—whatever the patient's age, duration of submersion, or method of resuscitation. Teaching parents, siblings, and caretakers of children simple and rapid artificial respiration is recommend.

Li G, Baker SP. Crashes of commuter aircraft and air taxis: what determines pilot survival? JOM 1993;35:1244-1249.

Most airplane crashes should be survivable if aircraft are well-designed. An analysis of National Transportation Safety Board data for the years 1983 to 1988 identified several factors related to pilot survival in commuter aircraft and air taxi crashes. Among the most important determinants of pilot death were postcrash fire, bad weather, and nonuse of shoulder restraints. Pilots are more likely to survive crashes if planes are equipped with more crashworthy fuel systems and aircraft seats. The study also underscored the value of shoulder restraints for pilots of commuter aircraft and air taxis; their use should be vigorously promoted.

Schootman M, Fuortes LJ, Zwerling C, Albanese MA, Watson CA. Safety behavior among Iowa junior high and high school students. Am J Public Health 1993;83:1628-1632.

Know your audience: that familiar concept can help injury prevention professionals target intervention strategies to specific groups. A recent study of adolescents in Iowa found that students attending rural schools use front seat belts and helmets less frequently than urban students. Seat belt and helmet use and swim safety decreased dramatically with age, while occurrences of driving or riding while drunk or high increased with age. Boys were less likely than girls to wear safety belts if they rode in the backseat of a car, and were less likely to wear moped helmets and to check water depth before diving.

Wrigley JM, Yoels WC, Webb CR, Fine PR. Social and physical factors in the referral of people with traumatic brain injuries to rehabilitation. Arch Phys Med Rehabil 1994;75:149-155.

The specialty of the attending physician was the most important determinant in referrals of people with traumatic brain injuries (TBI) to formal rehabilitation programs, according to this study. A patient is more likely to receive more formal rehabilitation care after discharge from the hospital when a physical medicine and rehabilitation specialist makes the referral. The study results underline the importance of rehabilitation medicine consultation, as well as making acute care providers aware of formal rehabilitation as a management option.

MAKE THIS YOUR NEWSLETTER!

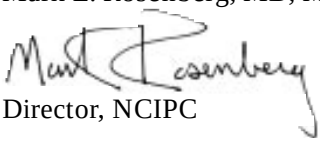
Welcome to the first issue of the quarterly newsletter, *Injury Control Update*. NCIPC has three main goals in publishing this newsletter:

- to foster exchange of information about research, programs, and resources in the field
- to highlight innovative work taking place in communities throughout the country
- to update injury control professionals on meetings, publications, and electronic media.

In short, we hope that this newsletter will be a tool to help build the injury control community. That will happen only if you—the readers—participate. We encourage you to submit ideas for articles, nominate outstanding programs for highlighting, and give us your thoughts on how to make this newsletter timely and relevant for you.

We look forward to a lively two-way communication. Write, e-mail, or send a message on our home page, where the newsletter also will appear.

Mark L. Rosenberg, MD, MPP



Director, NCIPC

Send your comments to Gwen Ingraham, Director, Office of Health Communications, NCIPC, CDC, MS K-65, 4770 Buford Hwy. NE, Chamblee, GA 30341-3724, or e-mail – GNI1@CIPCOD1.EM.CDC.GOV.

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